

AMENDMENTS

In the claims:

Please replace claims 1, 5, 6, 8, 12, 14, and 15 with the following claims:

Sub C1
Q1

1. A method of producing nuclear transfer embryos from donor cells of a first species and recipient oocytes from a second species comprising:
inducing the donor cells to undergo G₀ arrest;
fusing said donor cell to an enucleated recipient oocyte of the second species to create a nuclear transfer embryo, wherein the first and second species are not the same, and wherein the second species is a mammalian species;
and activating said nuclear transfer embryo.

Sub C2
Q2

5. The method of claim 4 wherein said enucleated bovine recipient oocyte is prepared from a bovine oocyte undergoing nuclear maturation within 16 hours of beginning *in vitro* culture.

6. The method of claim 1 wherein said enucleated recipient oocyte and said donor cell are fused by electric pulse to form a nuclear transfer embryo.

Q3

8. The method of claim 1 wherein said nuclear transfer embryo is activated by elevating intracellular calcium and then incubating with a serine threonine kinase inhibitor.

12. A non-human embryo produced by the method of claim 1.

Sub C3
Q4

13. A method of producing nuclear transfer embryos from a donor cell of one species other than bovine and a bovine recipient oocyte comprising:
culturing non-bovine donor cells selected from the group consisting of embryonic derived cells, somatic cells, germ cells, and genetically modified cells in low serum medium so that said donor cells are induced to arrest in the G₀ stage of the cell cycle;
selecting a bovine recipient oocyte which has completed nuclear maturation before 16 hours from the beginning of *in vitro* culture;
enucleating said bovine recipient oocyte after 16-32 hours of *in vitro* culture;
placing said donor cell under the zone pellucida of said enucleated oocyte so that said donor cell contacts said enucleated oocyte;
fusing said donor cell with said enucleated oocyte by electric pulse at 16-32 hours after the beginning of *in vitro* culture to create a nuclear transfer embryo;
and activating said nuclear transfer embryo by sequential incubation with ionomycin and 6-dimethylaminopurine at 16 to 32 hours after the beginning of *in vitro* culture.

14. A non-human embryo produced by the method of claim 13.

Q4 15. A non-human nuclear transfer embryo comprising cytoplasm and cell membrane from a first species, wherein the first species is a mammalian species, and differentiated cytoplasm, differentiated cell membrane, and nucleus derived from a differentiated cell of a second species.
